

Consumption  
1 vol

An Inaugural  
Dissertation  
on the  
Influenza.

1808

#20

submitted to the Examination of  
J. M'Dowell L. L. D. Provost.

the  
Trustees and Medical Professors  
of the

University of Pennsylvania  
for the

Degree of Doctor of Medicine  
on the 12<sup>th</sup> day of April 1808.

By Arnold Hanenham of Maryland  
Member of the Phil: Medical Society.



Definition.

The Influenza is a febrile Disease, attended with a preternatural discharge of mucus from the membrane lining the nose, fauces and bronchia - and is accompanied with sneezing, cough and a tendency to sweat.



## History of the Disease.

As a complete history of the Influenza, may be seen in various publications; I shall content myself, by giving an account of the symptoms under which it appeared last summer in Hagers Town.\*

The Influenza made its appearance in the latter part of August. The weather previous and for some time after the Disease had commenced was pleasant during the day; but the mornings were foggy and rather disagreeable. The fogs sometimes lasted until 10 o'clock, and were often attended by a peculiar smell.

The Diseases which prevailed in Town and its vicinity, before the Influenza appeared, were intermittent and a few cases of bilious remitting fever. The Cholera infantum, was also prevalent in Town, and at-

\* Washington County, in Maryland



tended with more malignancy than common.  
After the Influenza had commenced its career,  
all the other then prevailing diseases, in=  
sensibly disappeared, so that for about  
two or three weeks, this epidemic Catarrh  
reigned "without a Rival".

The Epidemic attacked persons of all ages and  
sexes (except children under four and a=  
dults above seventy years of age)\*

The Disease generally came on with lassitude,  
Tide, and Depression of mind; succeeded by  
a chilliness which sometimes continued for  
several hours, the skin at the same time  
being warm.

Pain in the head and breast was always  
complained of: The former was often very  
severe.

A frequent, quick and somewhat tense  
pulse, was a general, and a difficulty  
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\* out of forty persons (residing in the poor-house)  
but seven escaped the disease: They were persons  
above seventy.



of breathing a frequent symptom.

Some patients complained of severe pain in the back and limbs, and others suffered from pain in the Jaws and Ears.

An efflorescence was often perceived on the surface of the body, resembling erysipelas. I think I have seen this efflorescence alternate with the pain in the breast.

— A hoarseness was universal, and a constant hacking a frequent symptom.

The Cough was often very distressing particularly at night.

Sneezing was general in <sup>the</sup> beginning of the Disease

The appetite in general, was <sup>but</sup> little impaired.

Some patients however complained of a bad taste in the mouth. Nausea and vomiting occurred in a few instances

The tongue was either white or a little  
yellow



yellow. The Bowels were regular in most cases; but in some instances the disease terminated in diarrhoea.

A great tendency to sweating was observed in most cases.

The fever seldom lasted longer than four or five days; but the cough continued several weeks after all the other symptoms of the Disease had disappeared.\*

These were the most common symptoms of the Disease, and some persons were ~~but~~ so slightly affected, as to require no medical assistance; but much by confining themselves to their houses for a few days, using some demulcent Drinks and abstaining from animal food, they soon got well. — In others the symptoms were more severe and required the aid of medicine, to prevent the disease being thrown on the brain or terminating in pneumonia etc.

\* "These who have Coughs in the winter, and especially with southerly winds, are subject to fevers, during their having up much thick matter; but they commonly cease in four or five days. But the Coughs will extend to forty. Clift. Hipp: page 214. Ther



Thus far I have given an account of the Influenza, in its more common and mild forms. I shall next proceed to state a few cases, in which it assumed a more malignant Character.

I observed before, that immediately after the Influenza appeared, all the other then prevailing Diseases disappeared for a while\* So the measles banished the scarlatina from this City in 1798†.

After the Influenza had prevailed about twelve or fourteen Days, I met with two cases in which it assumed the form of a bilious remitting fever. In some cases it ran into a dangerous Typhus. In two or three cases which had been neglected, it assumed the form of a malignant fever. The patients died with hemorrhage from the intestines and livid spots on their skin.

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\* Dr Sydenham tells us "the plague suffered no rival in this City of London, in 1604"

† Rush's works



In one case, which came under my own notice, it assumed the phrenitic form of fever. This patient recovered after 160℥ of blood had been taken from him.

In another it assumed the apoplectic form of fever on the second day. The patient recovered after a large bleeding and a copious discharge of bile from the stomach. All these patients lived near marshes or water ponds.

In some instances (more particularly in persons predisposed to pulmonary complaints) it terminated in a fatal pneumonia.

After having given the History of the Influenza, it will probably be expected, I should say something about its remote cause. This however is a task which has hitherto baffled the ingenuity of the most celebrated Characters in medicine; and I am sorry to find that I have nothing to offer on this head "but Conjecture,"



Before I proceed to an inquiry into the remote causes of this Epidemic, I must make the following remarks.

1. The Influenza has often been the forerunner of pestilential or malignant Epidemics\*

"The Influenza was succeeded by fatal Epidemics in America in 1658. There was great sickness in New England†. In 1647 when the Influenza invaded America it was sickly in Europe. In 1747. an epidemic Catarrh prevailed in America and Europe. In the same year the bilious plague was in Philadelphia and in 1748 in Charleston.

I might here go on to quote a volume of similar instances, to prove that the influenza has generally been the forerunner of malignant fevers; or has immediately succeeded them. — It followed the yellow fever in  
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\*"The influenza prevailed in Europe in 1640 and the sore throat in Italy in 1651. Diseases which generally precede, pestilential Epidemics. Webster on pest. vol. 1. pag 190  
† Webster: 191



this City in 1793\* and last summer I am informed by a fellow Graduate†, it succeeded the same fever in Charleston.

2. The Influenza often assumes the Character of malignant fever.

In my History of the Disease, I said that I had seen it assume the apoplectic form of fever. The same thing happens now and then in the plague and yellow fever, and was not uncommon in Philadelphia in 1793. "The Influenza, the scarlatina and the mild bilious fever prevailed in this City before the yellow fever made its appearance. In the course of a few weeks they all disappeared, or appeared with symptoms of the yellow fever." and also "In a Girl of fourteen years, the disease came on with sneezing and a cough. She died with the usual symptoms of yellow fever;"

In a letter from Dr Haggarth to Dr Sothby, concerning the epidemic Catarrh in England

\* Rush's inquirer

† Mr Hainsworth.



in 1798, we read the following words "A young Lady at a boarding school, was taken at the same time and with like symptoms as 26 of the school fellows: Two days after her first indisposition, a diarrhoea with black stools began, and continued above three weeks, attended with a putrid fever black dry tongue, fauces and lips; Sordid teeth, total deafness and an Idiotic Delirium. Her mother and two attendants were infected by this fever, their heads were affected with violent pain and a wild delirium,\*

Dr Rush in his History of the Influenza of 1789 makes the following remark. "It would seem as if the same species of diseases resembled pictures, and that while some of them partook of the deep and vivid nature of mosaic-work, others appeared like the feeble and transient impressions of water colour."

Having made these remarks I shall proceed to an inquiry into the remote cause of the Influenza.

It.

\* Fothergill's works vol 8. page 290.



It has been disputed, whether this disease is derived from the effluvia of persons affected by it, or from something mixed with the floating in the air we inspire. — I do not deny that the effluvia of one infected person, may excite the seed of the disease into action in another; I will even admit, that there may have been instances, where such effluvia acted both as remote and exciting causes; but I must at the same time doubt, that without a peculiar constitution of the Atmospheer, the Influenza has ever been, or ever can become, such a universal Epidemic, as the records of medicine represent it and as we all have witnessed it but a few months ago.

Hippocrates when speaking of epidemic diseases in general, says "When many are seized with the same disease at the same time, the cause is chiefly to be attributed to what is most common and made use of by all."



This is certainly what we inhale in respiration;  
Galen is of the same opinion "For we all  
neither are exposed at the same time to  
other causes, nor are subject to them at  
all times; but the air surrounds us all, and  
is taken by all in respiration," Van Swieten  
in his comment on the 1404<sup>th</sup>. Aphorism of  
the celebrated Boerhaave, tells us upon the  
authority of Forestus, that a distemper which  
he calls a malignant Catarrh "arose as  
it were from a certain vapour, since thick  
clouds of an ill smell preceded it for some  
days, breaking out suddenly, that it all  
most instantly seized a thousand persons."  
About the latter end of the year 1732 and  
the beginning of 1733, when epidemic Ca-  
tarrhs raged throughout all Europe, we  
are informed that the like distemper  
prevailed in Africa, and even persons  
at sea, though at an immense distance  
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from Land, were affected in the same manner.  
From these quotations, we draw the following  
inferences.

1.) That a particular state of the Atmosphere  
is necessary to produce an epidemic disease - Ruesel in his learned treatise on the  
Plague, says "that without the concurrence  
of a pestilential state of the air, the contagion of that disease, does not spread even in  
Turkey."

2. The Influenza, being the most general of  
Epidemics can only be such through me-  
dium of a particular state of the Atmos-  
phere.

Of what this peculiar matter (which is ca-  
pable of producing this disease) consists,  
or how this epidemic state of the atmos-  
phere is formed, I am not able to determine  
nor is the time, allotted for preparing this  
essay, sufficient, to enter into such an  
investigation. —

\* Mémoires pour servir à l'histoire des insectes, par  
Reaumur. page 436.



There is something in the nature of Epidemics which leads me to believe, they are all derived from the same original source, and that the different forms under which they appear are only the effect of local or adventitious causes, entirely independant of that state of the air, which renders the disease epidemic.

This opinion is rendered more probable, when we consider, that all epidemics, are febrile diseases. Marsh exhalations, or miasmata from putrid vegetables, are known to produce malignant, bilious, intermittent and <sup>to</sup> intestinal fevers &c. If these miasmata are in a concentrated state, and exist in populous cities, at a season when the system is much depressed by a continual exposure to the direct and reflected rays of a scorching sun, the atmosphere (already in a favourable state to generate fever) rendered still more unhealthy



healthy by the Respiration and excretions of many  
thousand Inhabitants crowded together:  
Under such circumstances, have we not reason  
to fear, that the epidemic, will be of a ma-  
lignant kind? - To add further weight to this  
opinion, I must observe, that pestilential e-  
pidemics, generally first originate, in such  
parts of a City and among those Inhabitants  
where most of the above mentioned causes  
coöperate to the greatest extent. - They are  
in general, People in humble situations,  
living in narrow streets, filthy alleys and  
small houses, destitute of many comforts and  
sometimes of the common necessaries of life.  
Philadelphia has furnished many melancholy  
examples in support of my opinion. In  
the country (where miasmata are seldom in  
a very concentrated state and the common  
atmospheric air is always more pure than  
in Cities) epidemic diseases are propor-  
tionally less malignant. - The sudden change  
900



ges of temperature, to which country people  
are more exposed and probably their dif-  
ferent mode of living, predisposes them more  
to the intestinal forms of fever (particularly  
in the autumn) when such changes are  
frequent and sudden. — The intermittent  
and mild bilious fever, are the offspring  
of the same general cause. — If it be  
admitted, that all these states of fever,  
will be more or less malignant, in  
proportion as the causes which produce  
them, act with greater or less force up-  
on the system, and <sup>as</sup> local causes cooper-  
ate, the inference will be: That all E-  
pidemics are produced by one original <sup>cause</sup>  
and that the Influenza is only an in-  
ferior grade of this one Epidemic.  
Miasmata are the remote cause of this  
epidemic. When in a concentrated state,  
they act ~~the~~ most forcibly upon the  
system, attack many parts at once and  
the



thus produce malignant fevers. When less concentrated they produce mild bilious intermittent or intestinal fevers: according to the predisposition of the system and co-operation of, cold, moisture. But when miasmata are diffused through the whole or a great part of the atmosphere, they either are rendered innocent by being mixed with mixed with the air (perhaps decomposed)

But if the atmosphere is in a state favourable to the production of epidemics, these miasmata (however diffused) are then capable to affect the tender surface of the Schneiderian membrane, and Larynx and thus produce that form of Epidemic, called Influenza.

We proceed next to say a few words about  
The Cure of the Influenza.

Having considered the Influenza as an inferior grade of a general Disease, the method of cure must of course be directed upon general principles.



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ciples, and the doses of medicine, regulated by the violence of the symptoms. I shall content myself in this part of my Essay, by giving a short account of the Remedies, which were found most usefull in the Disease, as it appeared in Hagers Town.

1. Venæsection.

In most cases which require medical assistance, this remedy was of great service. The pulse was generally tense. The blood exhibited an uncommon black colour: This appearance of the blood was so general, that it was looked upon as a certain sign of the Epidemic. The first bleeding, generally relieved the pain in the head and breast; but in a few instances the pulse became hard and the pain increased after the first venæsection. In those cases a repetition of the operation seldom failed to give relief.

2. Purges.

I believe were hurtfull in many instances (except where the Disease was attended with bilious symptoms or violent pain in the Limbs).  
Carmel and Scalap. Cl. Ruini and Sulphate of Foa



were generally prepared. In cases where patients were predisposed to pulmonary complaints they always increased the pain in the breast; or operated so violently as on some instances to induce fainting.

### 3. Emetics.

were of great service in cases attended with nausea and a yellow tongue. Patients in this situation, generally discharged large quantities of mucus from the stomach. In children they were particularly useful to prevent an accumulation of mucus in the trachea.

### 4) Blisters

were seldom necessary, in the more simple form of Influenza: They were however of great service in cases attended with symptoms of pneumonia.

### 5. Diaphoretics.

Aromatic camphire with small doses of opium was given with advantage to keep the skin moist and render the circulation free and equal; but the cases, where diaphoretics could be of any advantage to the patient were not many; because they often excited such profuse sweats, as to render



to keep them alive; or they created  
such a distressing nausea particularly when  
nitre and emetic tartar was given, that it  
was seldom possible to continue them for any  
length of time. The spiritus minderii would  
answer in some cases when nitre was re-  
jected by the stomach.

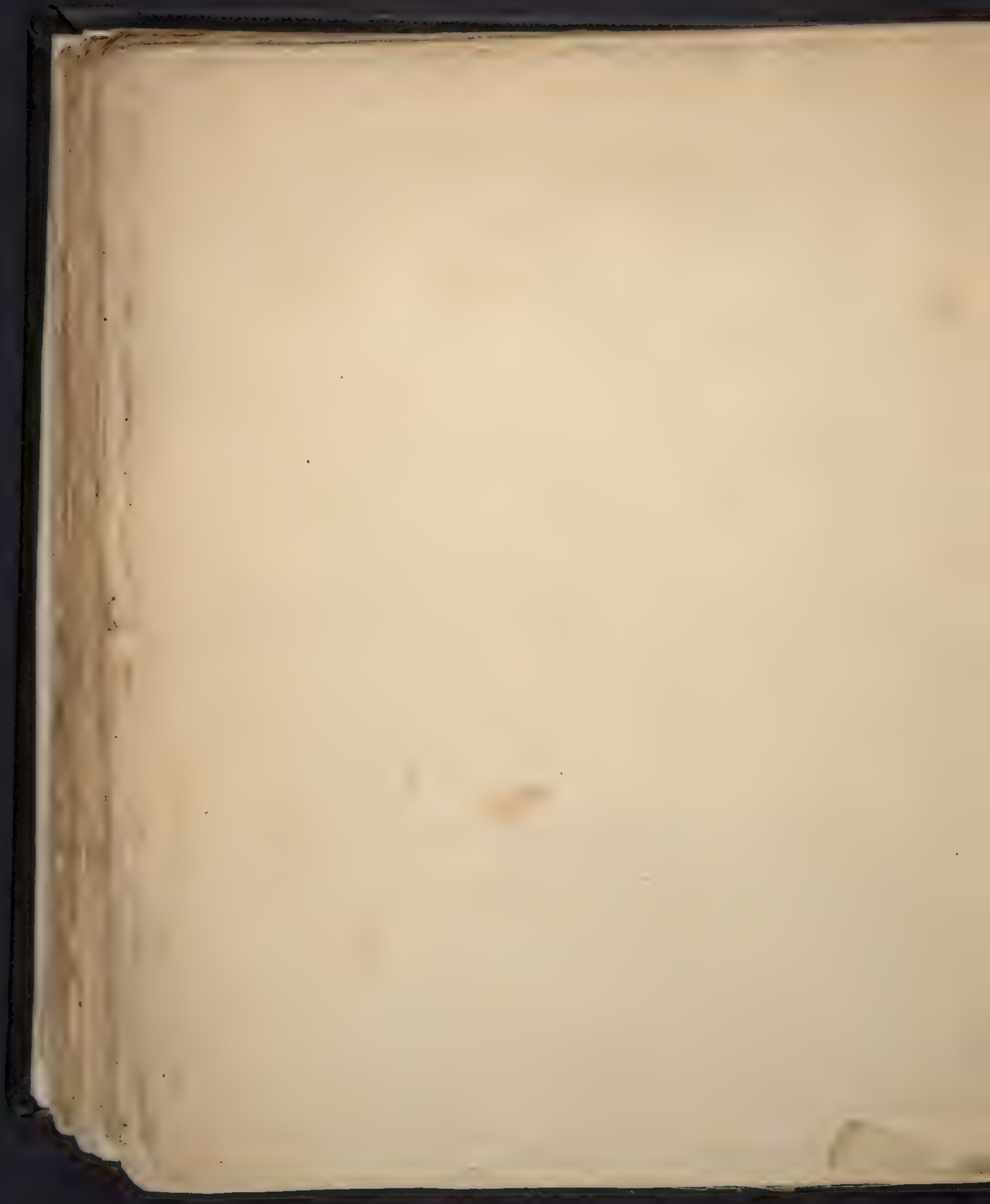
#### 6 Demulents

A Decoction of liquorice and Gum Arabic  
combined with a few Drops of purgative Be-  
linia was given with advantage, to re-  
lieve the Cough.

These Remedies combined with low Diet and  
rest, generally restored the patient to health  
in a few days.

In cases where the Disease assumed the  
Symptoms of malignant or Typhus fever.  
The same Remedies were prescribed as if  
those fevers had arisen from any other  
Cause.







Catarrhus Epidemicus 1808

Influenta

A. Hansen/Rampf







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By Arnold Stanenkamp of Maryland  
Member of the Phil: Medical Society.



### Definition.

The Influenza is a febrile Disease attended with a <sup>præ</sup>ternatural secretion of mucus from the membrane lining the nose fauces and bronchia - and is accompanied with sneezing, Cough and a tendency to sweat.



## History of the Disease.

As a complete history of the Influenza, may be seen in various publications; I shall content myself, by giving an account of the symptoms under which it appeared last summer in Flagers Town\*.

The Influenza made its appearance in the latter part of August. The weather previous and for some time after the Disease had commenced, was pleasant during the day; but the mornings were foggy and rather disagreeable. The fogs sometimes lasted until 10 o'clock and were often attended by a peculiar smell.

The Diseases which prevailed in Town and its vicinity, before the Influenza appeared, were intermittent and a few cases of bilious remitting fever. The Cholera infantum was also prevalent in Town, and at  
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After the Influenza had commenced its career,  
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The Disease generally came on with lassitude  
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but seven escaped the Disease. They were persons  
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An efflorescence was often perceived on the surface of the body, resembling erysipelas. I think I have seen this efflorescence alternate with the pain in the breast.

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Sneezing was general in the beginning of the disease.

The appetite in general was but little impaired: some patients however complained of a bad taste in the mouth. Nausea and vomiting occurred in a few instances.

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A great tendency to sweating was observed in most cases.

The fever seldom lasted longer than four or five days; but the cough continued several weeks after all the other symptoms of the Disease had disappeared.\*

These were the most common symptoms of the disease, and some persons were but so slightly affected as to require no medical assistance; but merely by confining themselves to their houses for a few days, using some demulcent drinks and abstaining from animal food, they soon got well. In others the symptoms were more severe and required the aid of medicine, to prevent the disease being thrown on the brain or terminating in pneumonia. &c.

\* "Those who have Coughs in the winter, and especially with variable winds, are subject to fevers, during the hunting or much thick weather; but they commonly cease in four or five days. But the Coughs will last to forty. Cl. St. Hippo page 214.



Thus far I have given an account of the Influenza, in its more common and mild forms. I shall proceed to state a few cases, in which it assumed a more malignant Character.

I observed ~~before~~ that immediately after the Influenza appeared, all the other, then prevailing diseases disappeared for a while\*. So the measles banished the scabellatus from this City in 1798†.

After the Influenza had prevailed about twelve or fourteen days, I met with two cases in which it assumed the form of a bilious remitting fever. In some cases it ran into a dangerous Typhus. In two or three cases which had been neglected, it assumed the form of a malignant fever. The patients died with hemorrhage from the intestines, and livid spots on the skin.

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In one case, which came under my own notice, it assumed the phrenitic form of fever. This patient recovered after 1603 of blood had been taken from him.

In another it assumed the apoplectic form of fever on the second day. The patient recovered after a large bleeding and a copious discharge of bile from the stomach. All these patients lived near marshes or millponds.

In some instances (more particularly in persons predisposed to pulmonary complaints) it terminated in a fatal pneumonia.

After having given the History of the Influenza it will probably be expected, I should say something about its remote cause. This however is a task which has hitherto baffled the ingenuity of the most celebrated Characters in Medicine; and I am sorry to add that I have nothing to offer in this head, but conjecture;



Before I proceed to an inquiry into the remote causes of this Epidemic, I must make the following remarks.

1. The Influenza has often been the forerunner of pestilential or malignant Epidemics\*  
» The influenza was succeeded by fatal Epidemics in America in 1688. There was great sickness in New England†. In 1747 when the Influenza invaded America, it was sickly in Europe. In 1749. an epidemic Catarrh prevailed in America and Europe. In the same year the bilious plague was in Philadelphia and in 1742 in Charleston.

I might here go on to quote a volume of similar instances, to prove that the influenza has generally been the forerunner of malignant fevers; or has immediately succeeded them. — It followed the yellow fever in this

\* "The influenza prevails over Europe in 1650 and the sore throat in Italy in 1671. Diseases which generally precede pestilential Epidemics. see below on pest. page 90. + 101.



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"The Influenza, the scarlatina and the milder bilious fever prevailed in this City before the yellow fever made its appearance. In the course of a few weeks they all disappeared, and appeared with symptoms of the yellow fever also." In a Girl of fourteen years, the disease came on with sneezing and a cough. She died with the usual symptoms of yellow fever. In a letter from Dr Haygarth to Dr Fothergill concerning the epidemic Catarrh in England.

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in 1446, we read the following words "A young  
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Hippocrates when speaking of epidemic disease in general, says, "when many are seized with the same disease at the same time, the cause is chiefly to be attributed to wind" is most common and more used by us



This is certainly what we inhale in respiration,  
Galen is of the same opinion." For we all  
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Of what this peculiar matter (which is  
capable of producing this Disease) con-  
sists or how this epidemic state of the  
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preparing this essay, sufficient to enter  
into such an investigation. —

\* Memoirs from Linnæus a *Historia des insectes*  
par Linnæus. page 435.



There is something in the nature of Epidemics which leads me to believe, they are all derived from the same original source, and that the different forms under which they appear, are only the effect of local or adventitious causes, entirely independent of that state of the air which renders the disease Epidemic.

This opinion is rendered more probable, when we consider, that all epidemics, are febrile diseases. - Marsh exhalations, or miasmata from putrid vegetables, are known to produce malignant bilious, intermit- tent and intestinal fevers. If those miasmata are in a concentrated state, and exist in populous cities, at a season when the system is much depressed, by a continual exposure to the direct and reflected rays of a scorching sun, the atmosphere already in a favourable state to generate fever, rendered still more un- healthy



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mosphere, they either are rendered <sup>in</sup>nocent by  
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We proceed next to say a few words about  
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Having considered the Influenza as an in-  
crease of a general disease the method  
of cure must of course be conducted upon general



Principles, and the Doses of medicine, regulated by the violence of the symptoms. I shall content myself in this part of my Essay, by giving a short account of the Remedies, which were found most unfaill in this Disease, as it appeared in Hagerstown.

### 1. Venesection

In most cases which required medical assistance this remedy was of great service. The pulse was generally tense. The blood exhibited an uncommon black colour: This appearance of the blood was so general, that it was looked upon as a certain sign of the epidemic. The first bleeding, generally relieved the pain in the head and breast; but in a few instances the pulse became hard and the pain increased after the first venesection. In those cases a repetition of the operation seldom failed to give relief.

### 2. Purges.

I believe were hurtfull in many instances (except where the Disease was attended with bilious symptoms; or violent pain in the Limbs.) Calomel and Salap. A. Nini and Sulph. of Soda. were



were generally preferred. In cases where patients were predisposed to pulmonary complaints, they always increased the pain in the breast as operated so violently as in some instances to induce fainting.

### 3. Emetics.

were of great service in cases attended with nausea and a yellow tongue. Patients in this situation, generally discharged large quantities of bile, from the stomach. In children they were particularly useful to prevent an accumulation of mucus in the trachea.

### 4. Blisters.

were seldom necessary, in the more simple form of Influenza: They were however of great service in cases attended with symptoms of pneumonia.

### 5. Diaphoretics

Nitre combined with small Doses of emetic Tartar, was given with advantage to keep the skin moist, and under the circulation free and equal; but the cases where



Diaphoretics could be of any advantage to the patient, were not many; because they often excited such profuse sweats, as to render it necessary to lay them aside; as they excited such a distressing nausea (particularly <sup>when</sup> nitre and Omit. Tartar was given) that it was seldom possible to continue them for any length of time. The spiritus mindeuili would answer in some cases, when, nitre was rejected by the stomach.

#### 6 Demulents

A Decoction of liquorice and Gum Anabii, combined with a few Drops of pectoral Elixir were given with advantage, to relieve the Cough.

These Remedies combined with low Diet and rest, generally restored the patient to health in a few days.

In Cases where the Disease assumed the symptoms of malignant or Typhus fever the same remedies were prescribed as if those fevers had arisen from any other cause.



